



DATA SHEET

Article number: 09900019



switch-disconnectors

DHS 6-063 NU

Compact switch-disconnectors for disconnection of system components with mains monitoring

10000

Function

Switch-disconnectors and main switches are able to separate electrical devices or even system parts from the mains completely at all poles for maintenance purposes, even under load or overload. For safe, reliable disconnection, the isolating distances run from pole to pole and also from input to output, importantly. Main switches are prescribed for these purposes in some areas by the technical connection conditions of the electrical supply company. Devices in the DHS 6 family are load isolators and main switches with a four-pole design, for which the N-contact is switched on in advanced mode and switched off in lagging mode. Their design makes them excellent for integration in the optics of the DFS residual current circuit-breakers. Thanks to the mains monitoring function, our NU switch-disconnectors also trip in the event of input-side mains disturbances, such as a neutral conductor interruption. This reliably protects electrical equipment against overvoltage damage.

Features

high short-circuit resistance and high switching capacity, double-sided two-tier terminals for large conductor cross-section and busbars, switch position indicator

Mounting

quick fastening to mounting rail, any installation position

Applications

especially suitable for use in main distribution boards in power supplies to large areas, such as campsites, marinas, allotment gardens and showrooms.

Notes

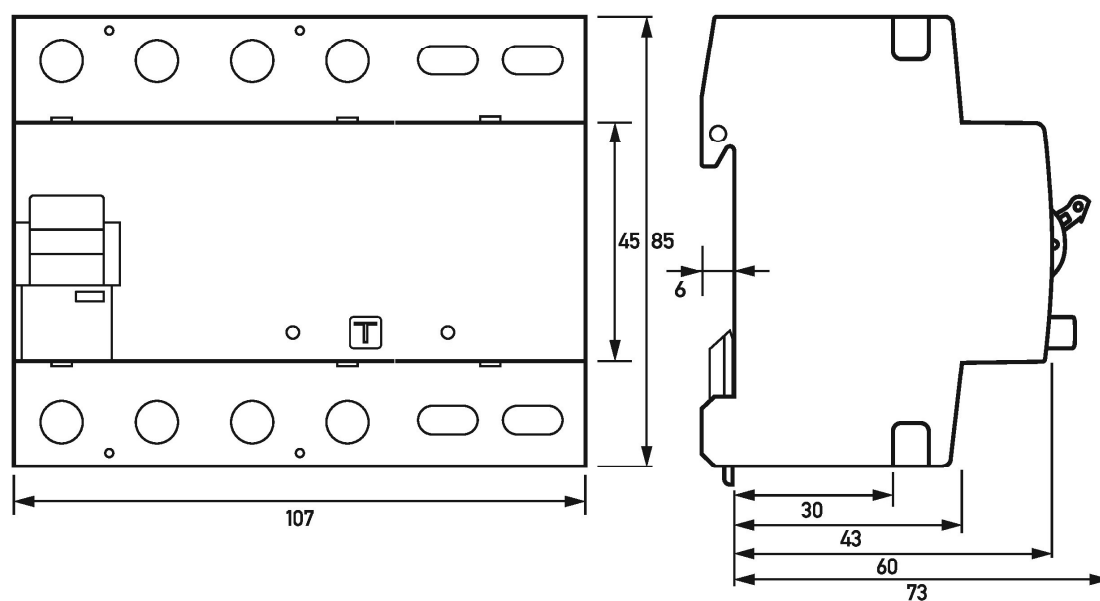
In practice, load switches, disconnectors and switch-disconnectors are used as main switches under EN 60947-3. The load switch must switch on, direct and switch off currents under operating conditions in the circuit (including a fixed operation-compatible overload). When switched off, no isolating function is required. A load switch is therefore not suitable for safe disconnection as understood in international installation regulations. Disconnectors must meet the required criteria for an isolating function when switched off, but must switch only currents of insignificant size during operation. The combination of both designs is known as a switch-disconnector, which combines both properties in one and can therefore be used universally for the safe release of electrical systems.

Technical Data

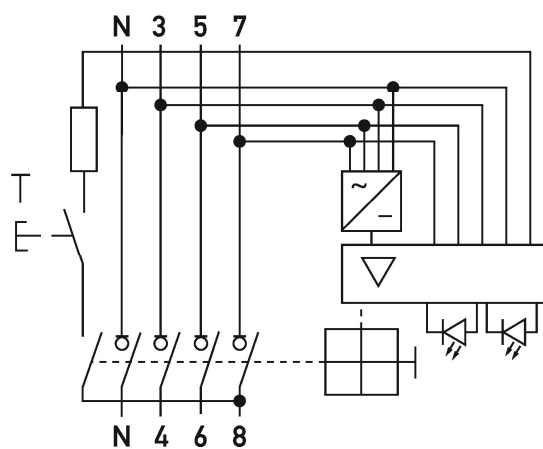
Series	DHS 6 NU
Display elements	Switch position indicator, active conductors, Network error indicator, Operating
Control elements	Switching knob, Residual current test button
Network fault detection	Phase failure, N conductor interruption, L and N conductor mix-up
Protective functions	Residual current protection
	Error voltage monitoring
Rated residual voltage	20 V
max. Switch-off time error voltage ≥ 50 V	150 ms
Non-trip time	70 ms
Trip threshold for voltage unbalance	5 % ... 10 %
Internal consumption	max. 3 W
Design	Rocker arm
Number	1
Colour	blue
	load circuit
Specification	load disconnect contact
Polzahl (gesamt)	4
Rated voltage (AC)	230 V, 400 V
Rated current (AC)	63 A
Rated short-circuit current	10 kA

max. Total rated switching capacity	10 kA
Rated insulation voltage	400 V
Rated impulse withstand voltage	4 kV
Rated frequency	50 Hz, 60 Hz
Allowed utilization category	AC-22a
Current heat loss per current path	3.1 W
Thermal Backup-fuse OCPD	63 A
Short-circuit backup-fuse SCPD	100 A
Back-up fuse type	gG
Screw-type terminal top and bottom (load circuit)	
Neutral conductor position	left
Protection against direct contact	DGUV V3, VDE 0660-514, finger and back-of-hand proof
Connection C1 Maximum number of conductors per terminal	2 (conductors of same type and cross-section)
Cross section solid	1-wire: 1.5 mm ² ... 50 mm ² ; 2-wire: 1.5 mm ² ... 16 mm ²
Connecting capacity flexible	1-wire: 1.5 mm ² ... 35 mm ² ; 2-wire: 1.5 mm ² ... 16 mm ²
Cross section stranded	1-wire: 1.5 mm ² ... 50 mm ² ; 2-wire: 1.5 mm ² ... 16 mm ²
Cross section AWG, solid	15 ... 1
Cross section AWG, stranded	15 ... 1
Cross section AWG, flexible	15 ... 1
Tightening torque	2.5 Nm ... 3 Nm
General data	
max. operating altitude above MSL	2000 m
mechanical endurance	min. 5000 switching cycles
electrical endurance	min. 2000 switching cycles
Surrounding atmosphere	normal environmental conditions
Storage temperature	-40 °C ... 70 °C
Ambient temperature	-25 °C ... 40 °C
Climate resistance	as per IEC 60068-2-30: damp/heat, cyclical (25°C/55°C; 93%/97% rel. humidity, 28 cycles)
Housing type	distribution board housing
Installation type	Mounting rail (35 mm)
Housing material	thermoplastic
Protection class	IP20
sealable	true
Width	108 mm
Height	85 mm
Depth	75 mm
Installation depth	69 mm
Module widths	6
Weight	0.555 kg
Design requirements/Standards	EN 60947-3

Dimensions



Wiring example



Wiring diagram DHS 6 NU